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44. (New) The wall structure of Claim 20, wherein said cellullosic layer is impregnated to a degree of saturation of from about 3 to 100%.

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45. (New) The wall structure of Claim 21, wherein said cellullosic layer is Kraft paper.

REMARKS

In response to the Office Action dated December 4, 2002, Applicant has further amended the claims in order to further distinguish the claimed invention over the cited prior art. Newly presented Claims 27-45 are directed to specific embodiments of the present invention. It is respectfully submitted that the currently presented claims are clearly patentably distinguishable over the cited prior art.

Claims 23, 3-8, 10-12 and 25 have been rejected under 35 USC 102(e) as being anticipated by Kelch et al. Claims 23, 3-8 and 10-12 have been rejected under 35 USC 102(b) as being anticipated by Minnick '778. Claims 23, 2, 9, 15-22, 24 and 25 have been rejected under 35 USC 103(a) as being unpatentable over Kelch in view of Minnick '451. Applicant respectfully traverses these grounds of rejection and urges that the currently claimed invention is clearly patentable over the cited prior art.

Claim 23 has been amended to limit the second, reinforcing layer to be a woven polymer fabric directly bonded to the first layer. Newly presented Claim 27 requires that the wall structure contain the first low density layer, a second, reinforcing layer selected from the group consisting of a polymer fabric and a biaxially oriented polymeric film directly bonded to the first layer and a cellullosic layer selected from the group consisting of paper, paper fiberboard, plastic-coated paper and plastic-coated paper fiberboard

laminated to the second, reinforcing layer. These structures clearly are not taught by the prior art cited by the Examiner.

As pointed out previously, the instant invention is directed to a wall structure which is contained in a building structure that is subject to government regulations with respect to transverse wind loading. The wall structure comprises a laminate which has a first layer having a density of from 0.5-3 lb./ft.³ and a second, reinforcing layer directly bonded to the first layer. In the present invention, foam insulating materials can be used without support from wood sheathing or other structural wall sheathing components in hurricane-prone geographic areas. This is desirable in that foam-insulating materials have energy saving features and typically are not feasible in hurricane-prone regions because they have to be supported with expensive structural materials that are capable of resisting hurricane force vacuums. The present invention provides an economically viable alternative to conventional materials that can improve energy efficiency and lower the cost of construction.

The Kelch et al reference discloses a laminated foam insulation board which comprises a panel of an insulating plastic foam material and a thermoplastic facer film adhered to opposite surfaces of the panel. The facer films are biaxially oriented with an ultimate elongation of less than 200% in both machine and transverse directions.

In contrast to Kelch et al, currently presented Claim 23 requires that the second, reinforcing layer be made of a woven polymer fabric directly bonded to the low density layer. Newly presented Claim 27 requires that a cellulosic layer selected from the group consisting of paper, paper fiberboard, plastic-coated paper and plastic-coated paper fiberboard be laminated to the second, reinforcing layer. Nothing in the Kelch et al reference suggests these types of construction. As such, it is respectfully submitted that the currently

presented claims clearly are patentably distinguishable over this reference.

Minnick '778 discloses a light weight, high strength laminate having improved fire resistant characteristics. One embodiment of the plastic laminates disclosed there is formed by providing two spaced parallel sheets of fiber-reinforced thermosetting resin and at least one layer of fiber-reinforced lofted thermoplastic resin laminated therebetween. In another embodiment of the reference, a layer of fiber-reinforced thermoplastic layer capable of being lofted is placed between two sheets of fiber-reinforced thermosetting resin to form a composite. In still another embodiment, a foam layer is provided between two parallel inner thermoplastic layers having outer layers of a glass cloth prepreg polyphenylene ether epoxy thermoset resin. Like the previously discussed reference, the Minnick reference has no disclosure of a woven polymeric fabric being laminated to a low density layer as is required in currently presented Claim 23 or a second, reinforcing layer selected from the group consisting of a polymeric fabric and a biaxially oriented polymeric film directly bonded to the low density layer and a cellulosic layer selected from the group consisting of paper, paper fiberboard, plastic-coated paper and plastic-coated paper fiberboard laminated to the second, reinforcing layer as is required in currently presented Claim 27. Therefore, it is respectfully submitted that the currently presented claims are clearly patentably distinguishable over Minnick '778.

Minnick '451 discloses a light weight, high strength laminate having improved fire resistant characteristics. A preferred embodiment includes a low density fiber-reinforced thermoplastic resin core provided between two parallel sheets of high density fiber-reinforced thermoset resin. Another embodiment includes a core of polymeric foam laminated between two parallel inner fiber-reinforced thermoplastic resin layers, each of which face an outer layer of fiber-reinforced

thermoplastic resin. Minnick '451 is actually a continuation of Minnick '778 and, therefore, has the same disclosure. Although, as the Examiner suggests, this reference does disclose a phenolic modified epoxy thermoset resin impregnated cotton linter paper serving as a thermoset resin layer 1 or 1a, these layers are laminated directly to the low density layer 2 and not to a second, reinforcing layer selected from the group consisting of a polymer fabric and a biaxially oriented polymeric film. Therefore, Minnick '451 does not provide any motivation to one of ordinary skill in the art to place a resin impregnated cellulosic layer next to a second, reinforcing layer selected from the group consisting of a polymeric fabric and a biaxially oriented polymeric film. The combination of either Minnick patent with Kelch et al does not result in a showing of prima facie obviousness under 35 USC 103 with respect to the currently claimed structure for the present invention.

The currently presented claims are clearly patentably distinguishable from the prior art cited by the Examiner. None of the references cited by the Examiner speak to the use of a polymeric fabric. Since the references cited by the Examiner are very specific as to the use of either a biaxially oriented polymeric film or a thermoset resin as the second, reinforcing layer, it would not be obvious to one of ordinary skill in the art to replace these critical layers with a woven polymeric fabric. Additionally, the resin-impregnated paper layer disclosed in Minnick is used as a thermoset resin which corresponds to the second, reinforcing layer of the present invention. However, in the present invention, the cellulosic layer is laminated to the second, reinforcing layer as opposed to being the second, reinforcing layer per se. The claimed structural make-up of the currently claimed invention clearly is patentably distinguishable over the prior art cited by the Examiner and no manipulation of the disclosures of these reference show the presently claimed invention.

An Appeal Brief has already been filed in the present application with the result that the Examiner re-opened prosecution. In light of the extended and expensive prosecution associated with the present application, the Examiner is respectfully requested to give due consideration to the arguments presented above and, unless some closer prior art is found, to pass the present application to allowance.

Reconsideration of the present application and the passing of it to issue is respectfully solicited.

Respectfully submitted,



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Encl: Marked-Up Amended Claims 7 and 23
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Marked-Up Amended Claims 7 and 23

U.S. Serial No. 08/982 559

7. (Amended) The wall structure of Claim 23, wherein said second, reinforcing layer is a ~~polymer fabric~~ made of a thermoplastic material.

23. (Twice Three Times Amended) In a wall structure that is contained in a building structure exposed to transverse wind loading, the improvement comprising said wall structure containing a first layer having a density of about 0.5-3 lb./ft.³ and a second, reinforcing layer ~~selected from the group consisting of a woven polymer fabric and a biaxially oriented polymeric film~~ directly bonded to the first layer.

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FEB 10 2003
TC 1700